

From: Trish Taylor/R3/USEPA/US
Sent: 5/17/2012 2:20:21 PM
To: Joanna Mcdonald/R3/USEPA/US@EPA
CC:
Subject: Fw: Truthout.org (5-17) When Polluted Water Is Safe to Drink: Inside the Dimock Fracking Fight

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From: Roy Seneca/R3/USEPA/US
To: Ron Borsellino/R3/USEPA/US@EPA, Kathy Hodgkiss/R3/USEPA/US@EPA, Jacqueline Guerri/R3/USEPA/US@EPA, Dennis Carney/R3/USEPA/US@EPA, Gerald Heston/R3/USEPA/US@EPA, Fran Burns/R3/USEPA/US@EPA, Richard Fetzer <Fetzer.Richard@epamail.epa.gov>, Richard Rupert/ESC/R3/USEPA/US, Helen Duteau/R3/USEPA/US@EPA, Trish Taylor/R3/USEPA/US, David Polish/R3/USEPA/US@EPA, Richard Sumter/R3/USEPA/US@EPA, Michael Kulik/R3/USEPA/US@EPA, Terri-A White/R3/USEPA/US@EPA, Joan Schafer/R3/USEPA/US@EPA, Cecil Rodrigues/R3/USEPA/US@EPA, Humane Zia/R3/USEPA/US@EPA, Heather Gray/R3/USEPA/US@EPA, Kelley Chase/R3/USEPA/US@EPA, Shawn Garvin/R3/USEPA/US@EPA, Daniel Ryan/R3/USEPA/US@EPA, William Early/R3/USEPA/US, capacasa.jon@epa.gov, Victoria Binetti/R3/USEPA/US@EPA, Jennie Saxe/R3/USEPA/US@EPA, Catherine Libertz/R3/USEPA/US@EPA, David Sternberg/R3/USEPA/US@EPA, KarenD Johnson/R3/USEPA/US@EPA, William Arguto/R3/USEPA/US@EPA, Thomas Damm/CBP/USEPA/US@EPA, Michael DAndrea/R3/USEPA/US@EPA, Amy Johansen/R3/USEPA/US@EPA
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When Polluted Water Is Safe to Drink: Inside the Dimock Fracking Fight

Wednesday, 16 May 2012 00:00 By Mike Ludwig, Truthout | Report

The US Environmental Protection Agency (EPA) has spent the past four months testing water wells used by families in the rural community of Dimock, Pennsylvania, where residents and environmental activists have accused a gas drilling company of contaminating water supplies while drilling for natural gas in the area. As the debate over the gas drilling technique known as fracking rages across the country, the Dimock debacle has made national headlines; pitted neighbor against neighbor; and attracted the attention of activists, industry groups and even a movie star. The EPA study is nearly complete and both sides of the fracking debate are eager for answers, but for many onlookers, the truth about the drinking water in Dimock has remained as murky as the water that its outspoken residents pull from their wells.

The EPA found pollutants in Dimock well water such as methane, arsenic, manganese, lead and barium. In some cases, the level of contamination exceeded federal health standards, but the agency has consistently stated the contamination levels do not pose a health concern or require immediate action from regulators.

This apparent inconsistency has led to some serious media spin. As the EPA released test results throughout the study, mainstream media outlets and industry groups were quick to declare that the water in Dimock was safe to drink and EPA did not link any contaminants to fracking. Meanwhile, environmentalists and the anti-fracking group Water Defense questioned the agency's accuracy and pointed to the presence of methane and other pollutants in several wells as evidence that the water is not safe to use.

Methane Contamination in Dimock

The EPA thus far has not identified the source of the contaminants found in the wells. Making such a statement could have a big impact on a lawsuit filed by 11 residents living in homes where the EPA gathered well water samples.

For the plaintiffs, the trouble started in 2008, when the wells used by several Dimock families were contaminated with methane. In 2009, fracking firm Cabot Oil & Gas was fined by state regulators for contaminating the wells with methane while fracking underground. Cabot routinely denies causing water contamination. There is a moratorium on fracking in the area.

Cabot was under state order to deliver fresh water in giant containers to families in Dimock with contaminated wells until November 2011, when state officials determined affected residents had been given enough time to sign an agreement with Cabot and allow the company to install water treatment systems. Several residents did not trust the treatment systems, however, and the plaintiffs against Cabot flat-out refused to sign an agreement with the drilling company.

The residents claimed their water was still unusable as the water deliveries came to and end, prompting Hollywood actor and Water Defense founder Mark Ruffalo and "Gasland" Director Josh Fox to deliver fresh water to the families in a high-profile media blitz last December.

In January, amid public outcry, the EPA announced it would deliver water to some of the families and test wells at 61 homes to determine if the residents are still being exposed to hazardous substances. Cabot called the study "politically motivated," and Cabot CEO Dan Dinges even wrote a letter to EPA Administrator Lisa Jackson charging that the study to determine if the water in Dimock was safe to drink undercut the Obama administration's commitment to expanding natural gas production.

Methane, Barium and Manganese

The EPA has now completed its testing at the 61 homes and, on May 11, the agency released its fourth round of results. As in the past three rounds of testing, the EPA said did detect some contamination, but not at levels that pose a health concern and require immediate action, according to the EPA. The EPA did find an elevated level of methane in one well and informed the resident. A biochemist speaking on behalf of Water Defense quickly disagreed, saying that his analysis of all of the results suggest that several wells are contaminated a levels of health concern for public officials under state and federal guidelines.

Truthout's own analysis of the EPA's entire data set shows that some of the wells contain potentially dangerous pollutants at levels that in some cases exceed federal safety standards. So, how can the EPA say the well water in Dimock is safe?

The EPA relies on federal standard called Maximum Containment Limit (MCLs), which is "the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur," according to the EPA. If contaminants in water exceed an MCL, regulators may take action under the Safe Drinking Water Act.

Two wells had levels of barium, a naturally occurring heavy metal used in gas drilling, that exceeded the MCL. Both residents, however, use reverse-osmosis water filters, according to EPA spokesperson Roy Seneca. The EPA consulted both residents about the situation, but only one was available to have their filtered tap water tested. Seneca said the tap water is safe. The same went for a well with elevated levels of lead - the well water exceeded the MCL, but the tap water used by the well's owner was safe to drink according to EPA standards.

On April 20, the EPA announced that one well had levels of arsenic that exceed the MCL by nine times. The resident using the well, however, declined to have their water replaced by the EPA, according to Seneca.

Five wells had elevated levels of manganese, a metal that has been linked to neurological disorders.

Seneca said the manganese levels at the tap exceeded the MCL for "taste and odor," but were below the suggested daily drinking water intake for an adult.

Some of the contaminants examined in the Dimock study, such as methane, do not have a federal MCL. Seneca said that EPA toxicologists and risk assessors "thoroughly reviewed" the data on contaminants without MCLs and concluded that none of the levels posed a "significant health concern."

Ronald Bishop, a fracking critic and biochemistry professor in the New York State University system, quickly disagreed with the EPA's latest analysis of the Dimock data. In a statement posted on the [Water Defense web site](#), Bishop said one-third of the wells were contaminated with methane within ranges that could be ignited or detonated, bringing to mind the now infamous images of fracking victims lighting their tap water on fire.

"These levels are of special concern where any hot water is used, since heating methane-contaminated water drives most of the methane into the air, which when inhaled can induce symptoms of oxygen deprivation in people or animals with cardiac, respiratory or central nervous system impairments," Bishop said.

Bishop said the levels of arsenic, barium, 2-methoxyethanol, lithium and sodium were also detected in some wells at levels of concern under state and federal guidelines.

"Overall, these observations suggest that many of these homeowners' water wells are significantly contaminated with a variety of pollutants in concentrations which are of concern to public health professionals," Bishop said.

Bishop slammed the EPA for apparently ignoring a November 2011 analysis of water testing data gathered from Dimock wells prepared for the agency by the [US Agency for Toxic Substances and Disease Registry](#). The report raised concerns about the reliability of the water filters and methane removal systems used by residents in Dimock and concluded that there is could be a "possible chronic public health threat" based on prolonged use of water from some wells in Dimock if exposure was not reduced in the future.

The EPA said it would resample four wells where previous Cabot and state data showed contamination at unsafe levels, but then did not show unsafe levels of contamination during the EPA's first round of sampling. Once all the sampling is complete, the EPA will analyze all the well water data for trends and patterns "as it relates to home water quality."

(Full Disclosure: Mark Ruffalo is a member of the Truthout Board of Advisers.)

Roy Seneca
EPA Region 3 Press Officer
Office of Public Affairs
seneca.roy@epa.gov
(215) 814-5567